

***Name: Andreea I. Mosila***

**American Public University**

Space Studies/Bachelors of Science/May 2013

E-mail: andreeamosila@gmail.com

Mentor: Dr. Melissa McGrath

Mentor Org: NASA Marshall Space Flight Center



## **Auroras of Ganymede**

The aurora of Ganymede has been studied in the past two decades for a better understanding of its magnetosphere, especially since the largest moon in the solar system is the only one featuring a magnetosphere within the magnetosphere of Jupiter. For this purpose, I analyzed two sets of data acquired with the Hubble Space Telescope's Space Telescope Imaging Spectrograph (STIS) instrument in 2010 and 2011, and that Dr. Melissa McGrath has not previously seen. The project involved data reduction and analysis, as well as data comparison to previously analyzed four sets of data spanning over nine years of observations. As a preliminary result, I have concluded that the old and new sets of data present similarities in regard to the location of the aurora, its brightness, and its emission patterns.

## **Research and Experience**

- **Marshall Space Flight Center / NASA Academy**, Research Associate, Summer 2012  
Interactive Data Language (IDL) data reduction and analysis.
- **American Public University**, Researcher, 2010-2012
  - Cosmology – dark energy.
  - Biology – organ transplants.
  - Human Anatomy and Physiology – Alzheimer's disease.
  - Physical Anthropology – evolution and the human genome.
  - Space Studies – the search for life in the solar system: research on the origins of life on Earth, and life possibilities on Mars, Europa, Titan and Enceladus.
  - Space Flight – contributions of robotic missions to the search for life in the solar system: research on data from: Mariner 4, Mars Viking landers, Mars Reconnaissance Orbiter, Rovers Spirit and Opportunity, Galileo, and Cassini-Huygens.
  - Comets, Asteroids, and Meteorites – comets and the origin of life.
  - History of Space - Mars exploration missions.
  - National Space Organization – the Romanian Space Agency (ROSA).

## **Honors, Awards**

- Four times awarded a place on the Dean's Honor List at the American Public University for academic achievements, integrity, and commitment displayed.
- Four times awarded a place on the President's Honor List at the American Public University for maintaining a cumulative grade point average of 4.0.
- Member of the Golden Key International Honour Society.
- Member of the Delta Epsilon Tau National Honor Society.
- Included in the 2012 edition of '*Who's Who Among Students in American Universities and Colleges*'.
- American Public University Ambassador.